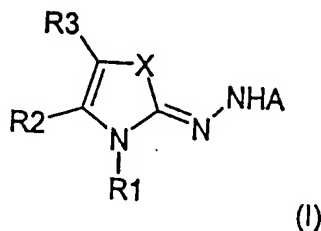


CLAIMS

- (Original)
1. Agent for coloring fibers (A), characterized in that it contains
(a) at least one hydrazone derivative of formula (I) or a physiologically compatible salt thereof



wherein

X denotes oxygen or sulfur,

A denotes hydrogen, an acetyl group, a trifluoroacetyl group, a formyl group, a (C₁-C₆)-alkylsulfonyl group or an arylsulfonyl group;

R1 denotes a saturated or unsaturated (C₁-C₁₂)-alkyl group, a halogen (F, Cl, Br, I)-substituted (C₁-C₁₂)-alkyl group, a hydroxy-(C₁-C₁₂)-alkyl group, an amino-(C₁-C₁₂)-alkyl group, a sulfonic acid-(C₁-C₁₂)-alkyl group, a formyl group, a C(O)-(C₁-C₁₂)-alkyl group, a C(O)-phenyl group, a C(O)NH-(C₁-C₁₂)-alkyl group, a C(O)NH-phenyl group, a substituted or unsubstituted phenyl group or a benzyl group;

R2 and **R3** can be equal or different and independently of each other denote hydrogen, a halogen atom (F, Cl, Br, I), a saturated or unsaturated (C₁-C₁₂)-alkyl group, a halogen (F, Cl, Br, I)-substituted (C₁-C₁₂)-alkyl group, a hydroxy-(C₁-C₁₂)-alkyl group, a (C₁-C₁₂)-alkoxy group, a cyano group, a nitro group, an amino group, a (C₁-C₁₂)-alkylamino group, a (C₁-C₁₂)-dialkylamino group, a carboxylic acid, a C(O)O-(C₁-C₁₂)-alkyl group, a substituted or unsubstituted C(O)O-phenyl group, a substituted or unsubstituted phenyl group or a naphthyl group;

or **R2** and **R3** together with the remainder of the molecule form a heterocyclic or carbocyclic, saturated or unsaturated, substituted or unsubstituted ring system;

(b) at least one known coupler or a physiologically compatible salt thereof; and

(c) a persulfate salt as oxidant.

- (Original)
2. Agent according to claim 1, characterized in that **X** denotes sulfur and **A** stands for hydrogen, **R1** denotes a saturated or unsaturated (C₁-C₁₂)-alkyl group, a hydroxy-(C₁-C₁₂)-alkyl group, an amino-(C₁-C₁₂)-alkyl group, or a substituted or unsubstituted phenyl group, and **R2** and **R3** independently of each other denote hydrogen, a saturated or unsaturated

(C₁-C₁₂)-alkyl group, a cyano group, a nitro group, an amino group, a (C₁-C₁₂)-alkylamino group, a (C₁-C₁₂)-dialkylamino group, a C(O)O-alkyl group or a substituted or unsubstituted phenyl group or a naphthyl group, or **R2** and **R3** together with the remainder of the molecule form a carbocyclic, unsaturated, substituted or unsubstituted ring system.

(currently amended)

3. Agent according to claim 1 ~~or 2~~, characterized in that the hydrazone derivative of formula (I) is selected from among

3-methyl-2(3H)-thiazolone hydrazone,
3,4-dimethyl-2(3H)-thiazolone hydrazone,
4-tert.butyl-3-methyl-2(3H)-thiazolone hydrazone,
3-methyl-4-phenyl-2(3H)-thiazolone hydrazone,
3-methyl-4-(4-tolyl)-2(3H)-thiazolone hydrazone,
4-(4-methoxy)phenyl-3-methyl-2(3H)-thiazolone hydrazone,
4-(4-ethoxy)phenyl-3-methyl-2(3H)-thiazolone hydrazone,
4-(4-bromophenyl)-3-methyl-2(3H)-thiazolone hydrazone,
4-(3-bromophenyl)-3-methyl-2(3H)-thiazolone hydrazone,
4-(4-chlorophenyl)-3-methyl-2(3H)-thiazolone hydrazone,
4-(3-chlorophenyl)-3-methyl-2(3H)-thiazolone hydrazone,
3-methyl-4-(4-nitrophenyl)-2(3H)-thiazolone hydrazone,
3-methyl-4-(3-nitrophenyl)-2(3H)-thiazolone hydrazone,
4-[(1,1'-biphenyl)-4-yl]-3-methyl-2(3H)-thiazolone hydrazone,
3-methyl-4-(2-naphthalenyl)-2(3H)-thiazolone,
ethyl 2-hydrazono-2,3-dihydro-3-methyl-4-thiazolecarboxylate,
3,4,5-trimethyl-2(3H)-thiazolone hydrazone,
3,4-dimethyl-5-phenyl-2(3H)-thiazolone hydrazone,
3,5-dimethyl-4-phenyl-2(3H)-thiazolone hydrazone,
3-methyl-4,5-diphenyl-2(3H)-thiazolone hydrazone,
5-ethyl-3-methyl-4-phenyl-2(3H)-thiazolone hydrazone,
4-(4-bromophenyl)-3-methyl-5-phenyl-2(3H)-thiazolone hydrazone,
3-methyl-5-phenyl-4-(4-tolyl)-2(3H)-thiazolone hydrazone,
5-(4-chlorophenyl)-4-phenyl-3-methyl-2(3H)-thiazolone hydrazone,
5-(4-chlorophenyl)-4-(4-methoxyphenyl)-3-methyl-2(3H)-thiazolone hydrazone,
ethyl 2-hydrazono-2,3-dihydro-3,4-dimethyl-4-thiazolecarboxylate,
4-amino-2-hydrazono-2,3-dihydro-3-methyl-5-thiazolecarbonitrile,
3-ethyl-4,5-dimethyl-2(3H)-thiazolone hydrazone,
ethyl 2-hydrazono-2,3-dihydro-3-ethyl-4-methylthiazolecarboxylate,

5-methyl-3-(1-methylethyl)-4-phenyl-2(3H)-thiazolone hydrazone,
 4,5-dimethyl-3-(1-methylethyl)-2(3H)-thiazolone hydrazone,
 3-(1-methylethyl)-4,5-diphenyl-2(3H)-thiazolone hydrazone,
 4,5-dimethyl-3-propyl-2(3H)-thiazolone hydrazone,
 4,5-diphenyl-3-propyl-2(3H)-thiazolone hydrazone,
 3-butyl-4,5-diphenyl-2(3H)-thiazolone hydrazone,
 4,5-dimethyl-3-(2-methylpropyl)-2(3H)-thiazolone hydrazone,
 3-(2-methylpropyl)-4,5-diphenyl-2(3H)-thiazolone hydrazone,
 3-hydroxyethyl-2(3H)-thiazolone hydrazone,
 3-hydroxyethyl-4-methyl-2(3H)-thiazolone hydrazone,
 3-hydroxyethyl-4,5-dimethyl-2(3H)-thiazolone hydrazone,
 3-aminoethyl-2(3H)-thiazolone hydrazone,
 3-aminoethyl-4-methyl-2(3H)-thiazolone hydrazone,
 3-aminoethyl-4,5-dimethyl-2(3H)-thiazolone hydrazone,
 3,4-diphenyl-2(3H)-thiazolone hydrazone,
 4-methyl-3-phenyl-2(3H)-thiazolone hydrazone,
 4-p-biphenyl-3-phenyl-2(3H)-thiazolone hydrazone,
 4-(4-methoxy)phenyl-3-phenyl-2(3H)-thiazolone hydrazone,
 4-tert.butyl-3-phenyl-2(3H)-thiazolone hydrazone,
 4,5-dimethyl-3-phenyl-2(3H)-thiazolone hydrazone,
 5-methyl-3,4-diphenyl-2(3H)-thiazolone hydrazone,
 3,4,5-triphenyl-2(3H)-thiazolone hydrazone,
 4,5-dimethyl-3-(phenylmethyl)-2(3H)-thiazolone hydrazone,
 3-(2-propenyl)-2(3H)-thiazolone hydrazone,
 4-methyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,
 4-tert.butyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,
 4-phenyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,
 4,5-dimethyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,
 4,5-diphenyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,
 ethyl 2-hydrazono-2,3-dihydro-3-[(phenylamino)carbonyl]-4-methylthiazolecarboxylate,
 3-methyl-4,5,6,7-tetrahydro-2(3H)-benzothiazolone hydrazone,
 3-methyl-2(3H)-benzothiazolone hydrazone,
 3,6-dimethyl-2(3H)-benzothiazolone hydrazone,
 6-chloro-3-methyl-2(3H)-benzothiazolone hydrazone,
 7-chloro-3-methyl-2(3H)-benzothiazolone hydrazone,
 6-hydroxy-3-methyl-2(3H)-benzothiazolone hydrazone,
 5-methoxy-3-methyl-2(3H)-benzothiazolone hydrazone,

7-methoxy-3-methyl-2(3H)-benzothiazolone hydrazone,
 5,6-dimethoxy-3-methyl-2(3H)-benzothiazolone hydrazone,
 5-ethoxy-3-methyl-2(3H)-benzothiazolone hydrazone,
 6-ethoxy-3-methyl-2(3H)-benzothiazolone hydrazone,
 3-methyl-5-nitro-2(3H)-benzothiazolone hydrazone,
 3-methyl-6-nitro-2(3H)-benzothiazolone hydrazone,
 5-acetamido-3-methyl-2(3H)-benzothiazolone hydrazone,
 6-acetamido-3-methyl-2(3H)-benzothiazolone hydrazone,
 5-anilino-3-methyl-2(3H)-benzothiazolone hydrazone,
 6-anilino-3-methyl-2(3H)-benzothiazolone hydrazone,
 2-hydrazono-2,3-dihydro-3-methyl-6-benzothiazolecarboxylic acid,
 2-hydrazono-2,3-dihydro-3-methyl-4-benzothiazolesulfonic acid,
 2-hydrazono-2,3-dihydro-3-methyl-5-benzothiazolesulfonic acid,
 2-hydrazono-2,3-dihydro-3-methyl-6-benzothiazolesulfonic acid,
 2-hydrazono-2,3-dihydro-3-methyl-7-benzothiazolesulfonic acid,
 2-hydrazono-2,3-dihydro-N,N,3-trimethyl-6-benzothiazolesulfonamide,
 [(2-hydrazono-2,3-dihydro-3-methyl-6-benzothiazolyl)oxy]acethydrazide,
 3-methylnaphtho[2,3-d]thiazole-2(3H)-one hydrazone,
 3-ethyl-2(3H)-benzothiazolone hydrazone,
 6-ethoxy-3-ethyl-2(3H)-benzothiazolone hydrazone,
 3-propyl-2(3H)-benzothiazolone hydrazone,
 3-butyl-2(3H)-benzothiazolone hydrazone,
 3-hexyl-2(3H)-benzothiazolone hydrazone,
 3-hydroxyethyl-2(3H)-benzothiazolone hydrazone,
 3-aminoethyl-2(3H)-benzothiazolone hydrazone,
 3-p-methylbenzyl-2(3H)-benzothiazolone hydrazone,
 2-hydrazono-2,3-dihydro-3-(2-hydroxyethyl)-6-benzothiazolecarboxylic acid,
 2-hydrazono-2,3-dihydro-6-methoxy-3(2H)-benzothiazolepropanesulfonic acid,
 6-hexadecyloxy-2-hydrazono-3(2H)-benzothiazolepropanesulfonic acid,
 ethyl 2-keto-3-benzothiazoline acetate hydrazone,
 3-acetyl-2(3H)-benzothiazolone hydrazone,
 2-hydrazono-3(2H)-benzothiazole carboxaldehyde,
 3-methyl-2(3H)-oxazolone hydrazone,
 3-phenyl-2(3H)-oxazolone hydrazone,
 3-methyl-2(3H)-benzoxazolone hydrazone,
 3-phenyl-2(3H)-benzoxazolone hydrazone,
 N-acetyl-3-methyl-2(3H)-thiazolone hydrazone,

N-acetyl-3,4-dimethyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3-methyl-4-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-4-(4-methoxy)phenyl-3-methyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3-methyl-4-(4-nitrophenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-4-[(1,1'-biphenyl)4-yl]-3-methyl-2(3H)-thiazolone hydrazone
 N-acetyl-3-methyl-4-(2-naphthalenyl)-2(3H)-thiazolone hydrazone
 ethyl N-acetyl-2-hydrazono-2,3-dihydro-3-methyl-4-thiazolecarboxylate
 N-acetyl-3,4,5-trimethyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3,4,-dimethyl-5-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3,5,-dimethyl-4-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3-methyl-4,5-diphenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3-ethyl-4,5-dimethyl-2(3H)-thiazolone hydrazone,
 N-acetyl-4-methyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3,4-diphenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-4-p-biphenyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-4-(4-methoxy)phenyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-4-tert.butyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-4,5-dimethyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-5-methyl-3,4-diphenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3,4,5-triphenyl-2(3H)-thiazolone hydrazone,
 N-acetyl-3-methyl-2(3H)-benzothiazolone hydrazone,
 N-acetyl-3-ethyl-2(3H)-benzothiazolone hydrazone,
 N-acetyl-3-butyl-2(3H)-benzothiazolone hydrazone,
 N-acetyl-3-hexyl-2(3H)-benzothiazolone hydrazone,
 N-acetyl-3-p-methylbenzyl-2(3H)-benzothiazolone hydrazone,
 N-acetyl-3-methyl-2(3H)-oxazolone hydrazone,
 N-acetyl-3-phenyl-2(3H)-oxazolone hydrazone,
 N-acetyl-3-methyl-2(3H)-benzoxazolone hydrazone,
 N-acetyl-3-phenyl-2(3H)-benzoxazolone hydrazone,
 N-formyl-3-methyl-2(3H)-thiazolone hydrazone,
 N-formyl-3,4-dimethyl-2(3H)-thiazolone hydrazone,
 N-formyl-3-methyl-4-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-4-(4-methoxy)phenyl-3-methyl-2(3H)-thiazolone hydrazone,
 N-formyl-3-methyl-4-(4-nitrophenyl-2(3H)-thiazolone hydrazone,
 N-formyl-4-[(1,1'-biphenyl)4-yl]-3-methyl-2(3H)-thiazolone hydrazone
 N-formyl-3-methyl-4-(2-naphthalenyl)-2(3H)-thiazolone hydrazone
 ethyl N-formyl-2-hydrazono-2,3-dihydro-3-methyl-4-thiazolecarboxylate

N-formyl-3,4,5-trimethyl-2(3H)-thiazolone hydrazone,
 N-formyl-3,4,-dimethyl-5-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-3,5,-dimethyl-4-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-3-methyl-4,5-diphenyl-2(3H)-thiazolone hydrazone,
 N-formyl-3-ethyl-4,5-dimethyl-2(3H)-thiazolone hydrazone,
 N-formyl-4-methyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-3,4-diphenyl-2(3H)-thiazolone hydrazone,
 N-formyl-4-p-biphenyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-4-(4-methoxy)phenyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-4-tert.butyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-4,5-dimethyl-3-phenyl-2(3H)-thiazolone hydrazone,
 N-formyl-5-methyl-3,4-diphenyl-2(3H)-thiazolone hydrazone,
 N-formyl-3,4,5-triphenyl-2(3H)-thiazolone hydrazone,
 N-formyl-3-methyl-2(3H)-benzothiazolone hydrazone,
 N-formyl-3-ethyl-2(3H)-benzothiazolone hydrazone,
 N-formyl-3-butyl-2(3H)-benzothiazolone hydrazone,
 N-formyl-3-hexyl-2(3H)-benzothiazolone hydrazone,
 N-formyl-3-p-methylbenzyl-2(3H)-benzothiazolone hydrazone,
 N-formyl-3-methyl-2(3H)-oxazolone hydrazone,
 N-formyl-3-phenyl-2(3H)-oxazolone hydrazone,
 N-formyl-3-methyl-2(3H)-benzoxazolone hydrazone and
 N-formyl-3-phenyl-2(3H)-benzoxazolone hydrazone.

(currently amended) claim 1

4. Agent according to ~~one of claims 1 to 3~~, characterized in that the coupler is selected from among

N-(3-dimethylaminophenyl)urea, 2,6-diaminopyridine, 2-amino-4-[(2-hydroxyethyl)amino]-anisole, 2,4-diamino-1-fluoro-5-methylbenzene, 2,4-diamino-1-methoxy-5-methylbenzene, 2,4-diamino-1-ethoxy-5-methylbenzene, 2,4-diamino-1-(2-hydroxyethoxy)-5-methylbenzene, 2,4-di[(2-hydroxyethyl)amino]-1,5-dimethoxybenzene, 2,3-diamino-6-methoxypyridine, 3-amino-6-methoxy-2-(methylamino)pyridine, 2,6-diamino-3,5-dimethoxypyridine, 3,5-diamino-2,6-dimethoxypyridine, 1,3-diaminobenzene, 2,4-diamino-1-(2-hydroxyethoxy)benzene, 1,3-diamino-4-(2,3-dihydroxypropoxy)benzene, 1,3-diamino-4-(3-hydroxypropoxy)benzene, 1,3-diamino-4-(2-methoxyethoxy)benzene, 2,4-diamino-1,5-di(2-hydroxyethoxy)benzene, 1-(2-aminoethoxy)-2,4-diaminobenzene, 2-amino-1-(2-hydroxyethoxy)-4-methylaminobenzene, 2,4-diaminophenoxyacetic acid, 3-[di(2-hydroxyethyl)amino]aniline, 4-amino-2-di[(2-hydroxyethyl)amino]-1-ethoxybenzene, 5-methyl-2-(1-methylethyl)phenol, 3-[(2-hydroxyethyl)amino]aniline, 3-[(2-aminoethyl)amino]aniline, 1,3-di(2,4-diaminophenoxy)-

propane, di(2,4-diaminophenoxy)methane, 1,3-diamino-2,4-dimethoxybenzene, 2,6-bis-(2-hydroxyethyl)aminotoluene, 4-hydroxyindole, 3-dimethylaminophenol, 3-diethylaminophenol, 5-amino-2-methylphenol, 5-amino-4-fluoro-2-methylphenol, 5-amino-4-methoxy-2-methylphenol, 5-amino-4-ethoxy-2-methylphenol, 3-amino-2,4-dichlorophenol, 5-amino-2,4-dichlorophenol, 3-amino-2-methylphenol, 3-amino-2-chloro-6-methylphenol, 3-aminophenol, 2-[(3-hydroxyphenyl)amino]acetamide, 5-[(2-hydroxyethyl)amino]-4-methoxy-2-methylphenol, 5-[(2-hydroxyethyl)amino]-2-methylphenol, 3-[(2-hydroxyethyl)amino]phenol, 3-[(2-methoxyethyl)amino]phenol, 5-amino-2-ethylphenol, 5-amino-2-methoxyphenol, 2-(4-amino-2-hydroxyphenoxy)ethanol, 5-[(3-hydroxypropyl)amino]-2-methylphenol, 3-[(2,3-dihydroxypropyl)amino]-2-methylphenol, 3-[(2-hydroxyethyl)amino]-2-methylphenol, 2-amino-3-hydroxypyridine, 2,6-dihydroxy-3,4-dimethylpyridine, 5-amino-4-chloro-2-methylphenol, 1-naphthol, 2-methyl-1-naphthol, 1,5-dihydroxynaphthalene, 1,7-dihydroxynaphthalene, 2,3-dihydroxynaphthalene, 2,7-dihydroxynaphthalene, 2-methyl-1-naphthol acetate, 1,3-dihydroxybenzene, 1-chloro-2,4-dihydroxybenzene, 2-chloro-1,3-dihydroxybenzene, 1,2-dichloro-3,5-dihydroxy-4-methylbenzene, 1,5-dichloro-2,4-dihydroxybenzene, 1,3-dihydroxy-2-methylbenzene, 3,4-methylenedioxyphenol, 3,4-methylenedioxyaniline, 5-[(2-hydroxyethyl)amino]-1,3-benzodioxole, 6-bromo-1-hydroxy-3,4-methylenedioxybenzene, 3,4-diaminobenzoic acid, 3,4-dihydro-6-hydroxy-1,4(2H)-benzoxazine, 6-amino-3,4-dihydro-1,4(2H)benzoxazine, 3-methyl-1-phenyl-5-pyrazolone, 5,6-dihydroxyindole, 5,6-dihydroxyindoline, 5-hydroxyindole, 6-hydroxyindole, 7-hydroxyindole and 2,3-indolinedione.

(currently amended)

claim 1

5. Agent according to ~~one of claims 1 to 4~~, characterized in that the persulfate salt is selected from among potassium persulfate, sodium persulfate and ammonium persulfate.

(currently amended)

claim 1

6. Agent according to ~~one of claims 1 to 5~~, characterized in that it contains the hydrazone derivatives of formula (I) and the couplers and persulfate salts in a total amount from 0.01 to 10 weight percent, each.

(currently amended)

claim 1

7. Agent according to ~~one of claims 1 to 5~~, characterized in that it additionally contains from 0.01 to 10 weight percent of a physiologically harmless direct dye from the group of cationic and anionic dyes, disperse dyes, nitro dyes, azo dyes, quinone dyes and triphenylmethane dyes.

(currently amended)

claim 1

8. Agent according to ~~one of claims 1 to 7~~, characterized in that it has a pH from 3 to 10.

(currently amended) claim 1

9. Agent according to ~~one of claims 1 to 8~~, characterized in that it is a hair colorant.

(original)

10. Two-component kit consisting of a dye carrier composition (A1) containing the compound of formula (I), another dye carrier composition (A2) containing the couplers and persulfate salts, and optionally an agent for adjusting the pH.

(original)

11. Two-component kit the first component of which consists of a powder containing the compounds of formula (I), the couplers and the persulfate salts and optionally other common powdered cosmetic additives, and the second component of which is water or a liquid cosmetic preparation optionally containing an agent for adjusting the pH.

(currently amended)

claim 1

12. Method for coloring hair whereby a hair colorant according to ~~one of claims 1 to 9~~ is applied to the hair, and after an exposure time of 5 to 60 minutes at a temperature from 20 to 50 °C the hair is rinsed with water, optionally washed with a shampoo and then dried.

(currently amended)

13. Method for coloring hair whereby the ready-for-use colorant (A) is prepared just before use by mixing two components (A1) and (A2) – optionally with addition of an alkalinizing agent or an acid – and is then applied to the hair, and after an exposure time of 5 to 60 minutes at a temperature from 20 to 50 °C the hair is rinsed with water, optionally washed with a shampoo and then dried, characterized in that a colorant (A) obtained by mixing two components (A1) and (A2) according to claim 10 ~~or 11~~ is used.